DR. PINKI CHAKRABORTY
(Assistant Professor)

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PROFILE

- Qualified **Ph.D. in Inorganic Chemistry** from **University of Delhi**; offering over 6 years of experience in Process Development R & D.
- Proven strengths in introducing process improvements/ modifications to enhance process efficiency. Fully conversant in handling sophisticated lab equipment's.
- Proficient in swiftly ramping up research projects & ensuring deliverables within stipulated time frame. Expertise in project planning, scheduling & resource planning to achieve specific research targets.
- **Self-motivated, hardworking and goal-oriented** with a high degree of flexibility, creativity, resourcefulness, commitment and optimism. Conceptually strong with an innovative and analytical approach to the work with an **eye for detail.**
- Outstanding communication and presentation skills with the ability to perform above expectations

Technical Skills

- Material Characterization, Hands on experience in PXRD, UV-Visible, FT-IR and Raman spectroscopic techniques, Nanomaterial synthesis.
- Softwares like Origin (Latest version), Gatan (TEM result analysis), High Score Plus (For indexing of PXRD results), Full Prof (For indexing of PXRD results),, Diamond (For structural analysis), Topaz (Indexing software), Powder X, GSAS (plotting of powder PXRX data).

AWARDS & ACCOLADES

- Recipient of UGC-SRF fellowship from 2015-2017
- Certificate of merit from Environmental Society, Hans Raj College, University of Delhi.
- Certificate awarded for oral presentation lecture in Prof. Amarnath Maitra Memorial Seminar, Chemistry Department, University of Delhi
- Awarded 1st Prize for excellent oral presentation in 'National Seminar on Advances in Polymer Science And Technology' March 9 and 10, 2016.
- Certificate of merit in 'Symposium on modern trends in Inorganic Chemistry-15 (MTIC-15), Department of Chemistry, Indian Institute of Technology, Roorkee.
- Certificate of participation in ISMC-2016,'Interdisciplinary Symposium on Materials Chemistry held at Bhabha Atomic Research Centre, Mumbai, December 6-10, 2016.
- Recipient of Best Performance certificate in CBSE 'Chatra Pratibha Award' in 2004.
- Certificate from National Science Olympiad, 2002, February, 2002.

EDUCATIONAL CREDENTIALS

Ph.D, Inorganic Chemistry, 2017 from University of Delhi, New Delhi

(Thesis: Synthesis, characterization and applications of selected novel inorganic, organic and hybrid layered compounds" submitted under the supervision of Prof. Rajamani Nagarajan, Materials Chemistry Group, Chemistry Department, University of Delhi)

M.Sc., Inorganic Chemistry, 2011 from Chemistry Department, University of Delhi, 63.15%

B.Sc., Chemistry (H), 2009 from Hans Raj College, University of Delhi

Class XII, 2004 from Raisina Bengali School, CBSE Board, New Delhi

Courses Completed

- UGC-SRF Apr 2015
- UGC-JRF Jun 2012
- Qualified GATE Exam, 2012

Research Conducted

- Guiding One PhD student and three PG and three UG level students (major projects) under me since 2020 – published 2 book chapters and communicated two journalpublication with her.
- Filed 1 patent 'GGU-006-018||GGU-001-012 - Chromogenic Functional Material for TTIs Invention' in 2020 and one consultancy project also on 'Chromogenic Functional Materials'.

Papers Published:

- Efficient adsorption of malachite green and Congo red dyes by the surfactant (DS) intercalated layered hydroxide containing Zn2+ and Y3+ - ions, **Pinki Chakraborty** and Rajamani Nagarajan*, Applied Clay Science 118 (2015) 308-315.
- An ethylene glycol intercalated monometallic layered double hydroxide based on iron as an efficient bifunctional catalyst, Rajamani Nagarajan*, Pankaj Gupta, Poonam Singh and **Pinki Chakraborty**, Dalton Transactions 45 (2016)17508-17520.
- Highly Ordered Polyaniline as an efficient dye remover, **Pinki Chakraborty**, Aman Kothari and Rajamani Nagarajan*, Adsorption Science And Technology (2017).
- Novel layered Zn-Y hydroxide and study of their UV properties by intercalation of organic aliphatic and aromatic UV-absorbent molecules, **Pinki Chakraborty***, Poonam Singh, Jyoti Singh and Achala Tripathi, submitted to ICABS - Published (2019).
- Formation and luminescence studies of SrGd0.94Dy0.06O4 host to investigate its suitability for display and dosimetric applications, Jyoti Singh, Vikas Dubey, **Pinki Chakraborty** and Achla Tripathi, submitted to ICABS – Published (2019).
- Biofriendly and green biocomposites based on poly (ε-caprolactone): Post-yield fracture, crystallization, rheological and micromechanical behaviors-**Pinki Chakraborty.**
- Effect of trivalent ions containing layered hydroxide acetate on the thermal stability and flame retardancy of poly (methyl methacrylate) composite-**Pinki Chakraborty** and Rajamani Nagarajan.
- Study on Ordered Organic Conducting Polymers (ICPs)-Polyaniline- Prashansa Gupta and **Pinki Chakraborty**
- Abstract published on 'Multifaceted perspectives and advancements of CO2 capturing. switchable polarity solvents and supercritical solvents' '**Paper Id: A-196' (2021) in 2nd International Conference Chemical, Bio & Environmental Engineering (CHEMBIOEN-2021**) August20-22, 2021.
- Proceedings, Abstract published on 'Impact of size and shape of ZnO nanoparticles on photocatalysis' '**Volume 3, Issue 1, (2021) in Proceedings International (ISSN 2668-6384),** https://doi.org/10.33263/Proceedings00.000000
- Paper under review on 'Mechanism and Prospects of Piezoelectric Materials in Drug Delivery' in 'Journal of Hazardous Materials'.

Papers Communicated:

- Multifaceted Perspectives and Advancements of CO2 Capturing Switchable Polarity Solvents And Supercritical Solvents- **Pinki Chakraborty**, Anupama Sharma and Sandeep Kumar submitted to 'Microchemical Journal'.

- A Review on Mechanisms and Prospects of Piezoelectric Materials as Drug Delivery Vehicle, Sunny Bidhuri, Anupama Sharma, **Pinki Chakraborty**, P K Sharma, Sandeep Kumar and Arti Gupta submitted to 'Journal Of Hazardous Materials'.

Book Chapter Published:

1. Recent Study on Novel Layered Zn-Y Hydroxide and their UV Properties by Intercalation of Organic Aliphatic and Aromatic UV-Absorbent Molecules, Pinki Chakraborty, Poonam Singh, Jyoti Singh and Achala Tripathi.

2. CO_2-triggered switchable polarity solvents and their advancements January 2022, DOI:10.1016/B978-0-12-819850-6.00008-5 In book: Green Sustainable Process for Chemical and Environmental Engineering and Science (pp.149-156).

3. One chapter submitted to '**Biofuel Extraction Techniques'** book (2022); 'Role of CO2 Triggered Switchable Polarity Solvents and Supercritical Solvents during Biofuel Extraction'.

Workshops/Conferences Attended

- Efficient adsorption of Congo red and Malachite green dyes by surfactant (SDS) intercalated layered hydroxide containing Zn2+ and Y3+-ion. Pinki Chakraborty and Rajamani Nagarajan, 9th National conference on Solid State Chemistry and Allied Areas ISCAS-2015, organized by Bhaskaracharya College of Applied Sciences (University of Delhi), 8-10 May 2015.
- A new family of multifunctional layered double hydroxides. Poonam Singh, Pinki Chakraborty and Rajamani Nagarajan, 5th DAE BRNS ISMC 2014, Mumbai, India (9-13 December 2014).
- Efficient adsorption of Congo red and Malachite green dyes by surfactant (SDS) intercalated layered hydroxide containing Zn2+ and Y3+-ion by Pinki Chakraborty and Rajamani Nagarajan, 9th National conference on Solid State Chemistry and Allied Areas ISCAS-2015, organized by Bhaskaracharya College of Applied Sciences (University of Delhi), 8-10 May 2015.
- A new family of multifunctional layered double hydroxides. Poonam Singh, Pinki Chakraborty and Rajamani Nagarajan, 5th DAE BRNS ISMC 2014, Mumbai, India (9-13 December 2014).
- Enhancement of thermal property of PMMA through composite formation with LDH by Pinki Chakraborty and Rajamani Nagarajan, 5th DAE BRNS ISMC 2016, Mumbai, India.
- Enhancement of thermal property of PMMA through composite formation with LDH by Pinki Chakraborty and Rajamani Nagarajan, ICMTECH-2016, Delhi.
- Successfully completed IUCr workshop on X ray diffraction systems and applications, 25-26th September 2014.
- Workshop on spectro-electrochemistry, held at Department of Chemistry, University of Delhi, 2015

Date of Birth: 3rd Feb, 1989
Languages Known: English, Hindi
References: Available on Request